

Remarks

Applicants thank the Examiner for the telephonic interview on April 01, 2009, and for withdrawing the finality of the previous rejection. Based on the following remarks and the telephonic interview of April 01, 2009, Applicants respectfully submit that this Application is in condition for allowance.

Rejections under 35 U.S.C. § 103

Claims 1-3, 5-12, and 14-18

Claims 1-3, 5-12, and 14-18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Riley *et al.*, U.S. Patent 6,507,391 ("Riley") in view of Stokdijk (5,675,517). Applicants respectfully traverse the rejections of claims 1-3, 5-12, and 14-18.

Riley and Stokdijk, alone or in combination, do not teach or suggest each and every feature of claim 1 as amended. For example, Riley and Stokdijk, alone or in combination, do not teach or suggest removing a DC offset from the signal with a base line restoration circuit to obtain a base line restored signal, wherein the DC offset is locked during pulses of the electronic signal, as recited in claim 1.

Stokdijk contains no reference to, or suggestion of, having a base line restoration circuit with a DC offset locked during pulses as required by claim 1. The Office Action alleges that Stokdijk teaches a method, wherein the DC offset is locked during pulses of the electronic signal. (*See* the Office Action at p. 3 paragraph 1). Applicants disagree. As discussed during the telephonic interview of April 01, 2009, in column 5 lines 51-59 and column 6 lines 61-66, i.e., the text referred to by the Office Action, Stokdijk refers

only to a base line restoration circuit and an offset compensation circuit. There is no teaching or suggestion in Stokdijk of a DC offset that is locked during pulses. Neither does Riley teach or suggest having a DC offset locked during pulses of an electronic signal as recited in claim 1.

Although both Riley and Stokdijk appear to reduce the DC component of an input signal, they do so by the use methods that are different from the present invention. As noted in the Applicants' response to a previous Office Action, the use of a baseband filter (e.g., as used in Riley) is an alternative to a base line restoration circuit (e.g., as recited in claim 1) to remove DC offset. The base line restoration circuit (e.g., 5:49-51) described in Stokdijk estimates the DC component to be reduced from the signal and then adjusts the signal based on the estimated DC component. As pointed out in Stokdijk, this would typically not adequately adjust the signal when operating at high event rates. (*See* 7:25-39). Therefore, to further reduce the DC component, Stokdijk requires a separate offset compensation circuit that causes the base line restoration circuit to alter the estimate of the DC component by a predetermined amount. (*See* 5:55-57, 7:41-44).

In contrast to Riley and Stokdijk, the present invention teaches an enhanced base line restorer with locking. The enhanced base line restorer with locking can, for example, fix the offset to be used in removing the DC component during acquisition of the signal so that errors in base line restoration due to effects of high event rate are avoided. (*See* paragraphs [0033]-[0034]). Dynamically acquiring the offset to be used during signal acquisition, as in the present invention, is more adaptable to different types of signals and can be generally more accurate than the method described in Stokdijk.

For at least the foregoing reasons, claim 1 is patentable over Riley in view of Stokdijk. Independent claim 10 recites a system corresponding to the method recited in independent claim 1. Accordingly, independent claim 10 is patentable over Riley in view of Stokdijk for at least the same reasons as independent claim 1. Dependent claims 2-3, 5-9, 11-12, and 14-18 are likewise patentable over Riley in view of Stokdijk for at least the same reasons as the independent claims from which they depend, and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 1-3, 5-12 and 14-18 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Claims 9 and 18

Claims 9 and 18 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Riley and Stokdijk in view of U.S. Patent No. 5,598,158 to Linz *et. al.* ("Linz"). Applicants respectfully traverse.

Linz does not supply the teachings missing from Riley and Stokdijk described above. For example, Linz does not teach "removing a DC offset from the signal with a base line restoration circuit to obtain a base line restored signal wherein the DC offset is locked during pulses." Claim 9 is dependent from independent claim 1, and claim 18 is dependent from independent claim 10. Therefore, claims 9 and 18 are patentable over Riley and Stokdijk in view of Linz for at least the same reasons set forth above as the independent claims from which they depend, and further in view of their own respective features. Accordingly, Applicants respectfully request that the rejection of claims 9 and 18 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

Other matters discussed in the telephonic interview of April 01, 2009

In accordance with the interview of April 01, 2009, Applicants have reviewed claim 1 for compliance with 35 U.S.C. § 101. Claim 1 recites structural elements "a base line restoration circuit" (*See* element (a)), "a logarithmic amplifier" (*See* element (b)), "an analog-to-digital converter" (*See* element (c)), and "an electronic processor" (*See* element (d)). Accordingly, and at least for that reason, Applicants respectfully submit that claim 1 is patent-eligible under 35 U.S.C. § 101.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.


Reply to Office Action of January 16, 2009

Jochum *et al.*
Appl. No. 10/587,887

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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